

CLAIM AMENDMENTS

IN THE CLAIMS

This listing of the claims will replace all prior versions, and listing, of claims in the application or previous response to office action:

1. **(Currently Amended)** A method for fabricating a transmission balanced photomask, the method comprising:

forming an alternating aperture phase shifting photomask pattern on a substrate having trenches formed therein and the substrate having an index of refraction; and

forming a single layer of transmission balancing material over the substrate, the transmission balancing material having an index of refraction greater than the index of refraction of the substrate **and being substantially transparent to at least one wavelength**.

2. (Original) The method of Claim 1 wherein the transmission balancing material further comprises spin on glass (SOG).

3. (Original) The method of Claim 1 further comprising overcoating the transmission balancing material on the substrate.

4. (Original) The method of Claim 1 further comprising the layer of transmission balancing material having an index of refraction greater than 1.5.

5. (Original) The method of Claim 1 further comprising the layer of transmission balancing material having an index of refraction approximately equal to 2.0.

6. (Original) The method of Claim 1 further comprising planarizing the transmission balancing layer.

7. (Original) The method of Claim 6 further comprising planarizing the transmission balancing layer using a chemical mechanical polishing (CMP) technique.

8. (Original) The method of Claim 1 further comprising forming an antireflective layer on the transmission balancing layer.

9. (Original) The method of Claim 1 further comprising attaching a pellicle over the transmission balancing layer.

10. (Original) The method of Claim 1, wherein forming the transmission balancing layer comprises using a technique selected from the group consisting of physical vapor deposition, chemical vapor deposition, and gas phase deposition techniques.

11. **(Currently Amended)** A method for fabricating a phase shifting mask, the method comprising:

providing an etched transparent substrate having a recessed transmissive portion, the etched substrate having a first refractive index;

depositing an absorber layer on the etched substrate;

patterning the absorber layer; and

forming a single transmission balancing layer on the resulting patterned absorber layer, the transmission balancing layer having a second refractive index greater than the first refractive index **and being substantially transparent to at least one wavelength**.

12. (Original) The method of Claim 11, further comprising planarizing the transmission balancing layer.

13. (Original) The method of Claim 11, wherein the transmission balancing layer comprises spin-on glass (SOG).

14. (Original) The method of Claim 11 further comprising the transmission balancing layer having an index of refraction greater than 1.5.

15. (Original) The method of Claim 11 further comprising the transmission balancing layer having an index of refraction of approximately 2.0.

16. **(Currently Amended)** A phase shifting mask, comprising:
an etched transparent substrate including a recessed transmissive portion;
a patterned absorber layer deposited on the substrate; and
a single transparent transmission balancing layer formed on the patterned absorber layer, the transmission balancing layer operable to retain refracted light within recessed transmissive portion.

17. **(Currently Amended)** The phase shifting mask of Claim 16, wherein the substrate has a first refractive index and the **protective transmission balancing** layer has a second refractive index greater than the first refractive index.

18. (Original) The phase shifting mask of Claim 16, wherein the transmission balancing layer comprises spin-on glass (SOG).

19. (Original) The phase shifting mask of Claim 16, wherein the substrate comprises quartz.

20. (Original) The phase shifting mask of Claim 16 further comprising the transmission balancing layer having an index of refraction approximately equal to 2.0.

21. **(Currently Amended)** A method for fabricating a phase shifting mask, the method comprising:
providing an etched transparent substrate having a recessed transmissive portion;
depositing an absorber layer on the etched substrate;
patterning the absorber layer; and

forming a **single** transmission balancing layer on the resulting patterned absorber layer, the transmission balancing layer having a refractive index greater than the refractive index of air **and being substantially transparent to at least one wavelength**.

22. (Original) The method of Claim 21, further comprising planarizing the transmission balancing layer.

23. (Original) The method of Claim 21, wherein the transmission balancing layer comprises spin-on glass (SOG).

24. (Original) The method of Claim 21 further comprising forming the transmission balancing layer using a technique selected from the group consisting of vacuum evaporation, magnetron sputtering, ion beam sputtering, and chemical vapor deposition.